Practice Problem of Conditional Statement

1. Take any integer input through the keyboard. Write a program to find out whether it is an odd number or an even number. For inputs that are not a number, the program will show "Error" as output. (Using If-else)
2. Take any letter input through the keyboard. Write a program to find out whether it is a vowel or a consonant. For non-alphabet inputs, the output will be "Not a character" (Using If-else and switch case).
3. Take a character as input through the keyboard. Write a program to find out whether the gender is Male or Female. (Using If-else and switch case)
   Inputs: take input 'M' or 'm' for male and take input 'F' or 'f' for female. For any other input, the result will show "Undefined".
4. Take any integer as input through the keyboard. Write a program to find out whether it is a positive number or a negative number. (Using If-else)
5. Take Any year is input through the keyboard. Write a program to determine whether the year is a leap year or not. Show an error message if the input number is not a year. (Using if-else)
6. Take any 3 integer numbers. Write a program to find out the largest number among 3 numbers. (Using If-else)
7. Take any 3 integer numbers as input through the keyboard. Write a program to find out the smallest number among 3 numbers. (Using If-else)
8. Take any 3 integer numbers are input through the keyboard. Write a program to find out the largest number among 3 numbers and whether the largest number is Even or Odd. (Using If-else)
9. Take any 3 integer numbers as input through the keyboard. Write a program to find out the smallest number among 3 numbers and whether the smallest number is Even or Odd. (Using If-else)
10. Find the absolute value of a number entered through the keyboard. (Using If-else)
11. Take any 5 integer numbers are input through the keyboard. Write a program to find out the 3rd largest number among 5 numbers. (Using If-else)
12. Take any 4 integer numbers are input through the keyboard. Write a program to find out the 2^{nd} smallest number among 5 numbers. (Using If-else)
13. Take input of age of 3 people by the user and determine oldest and youngest among them. (Using If-else)
14. A student will not be allowed to sit for an exam if his/her attendance is less than 80%. Take the following input from the user
    a. Number of classes held.
    b. Number of classes that were attended by the student.

Find out the attendance percentage for the student and show if the student will be allowed to sit for the exam or not. (Using If-else)

15. A University has the following rules for the grading system:

Mark	Grade	GPA
90-100	A+	4.00
85-89.99	A	3.75
80-84.99	B+	3.50
75-79.99	B	3.25
70-74.99	C+	3.00
65-69.99	C	2.75
60-64.99	D+	2.50
50-59.99	D	2.25
0-49.99	F	0.00

Write a program that will take 5 course marks as inputs. Show the received grades for each of them. Also calculate the CGPA using the five marks.

16. If the buying price and selling price of an item is taken as user input, write a program to determine whether the seller has made a profit or incurred a loss. Also, determine how much profit he made or the loss he incurred. (Using If-else)

Write a program to find out whether it is a positive number or negative number.

Solution:

```
#include <iostream>
using namespace std;

int main() {

 int number;

 cout << "Enter an integer: ";
 cin >> number;   //taking user input for the number


 if (number >= 0) {
  cout << "You Entered a positive integer: " << number << endl;
 }   //Input number is positive
```

```
  else {
    cout << "You Entered a negative integer: " << number << endl;
  }  //Input number is negative
  return 0;
}
```

Find largest number between 2 numbers

Solution:

```
#include <iostream>
using namespace std;

int main() {

   double n1, n2;

   cout << "Enter two numbers: ";
   cin >> n1 >> n2 ;   //taking user input for two numbers

   if(n1 > n2)
      cout << "Largest number: " << n1;   //n1 is the larger than n2

   else if(n2 > n1 )
      cout << "Largest number: " << n2;   //n2 is the larger than n1
   else
      cout<<"The numbers are equal"<<endl; //both numbers are same
    return 0;
}
```

Program to build a simple calculator using Switch Statement

Solution:

```
#include <iostream>
using namespace std;

int main() {
   char oper;
   float num1, num2;
   cout << "Enter an operator (+, -, *, /): ";
   cin >> oper;
```

```
    cout << "Enter two numbers: " << endl;
    cin >> num1 >> num2;

    switch (oper) {
        case '+':
            cout << num1 << " + " << num2 << " = " << num1 + num2;
            break;
        case '-':
            cout << num1 << " - " << num2 << " = " << num1 - num2;
            break;
        case '*':
            cout << num1 << " * " << num2 << " = " << num1 * num2;
            break;
        case '/':
            cout << num1 << " / " << num2 << " = " << num1 / num2;
            break;
        default:
           cout << "Error! The operator is not correct";
            break;
    }

    return 0;
}
```